MSDS # 7237

ADM **Ethanol**

MATERIAL SAFETY DATA SHEET

(Complies with 29 CFR 1910.1200)

PRODUCT NAME: **CDA 19 Ethanol, 190 Proof**

ADM PRODUCT CODE: 017729

SYNONYMS: CDA 19, 190 Proof Ethanol, Completely Denatured Alcohol

SECTION I

MANUFACTURER: Archer Daniels Midland Company
4666 Faries Parkway
Decatur, IL 62526

EMERGENCY NUMBER: (800) 424-9300 Chemtrec (USA)
(217) 424-5200 ADM Corporate

INFORMATION: (888) 371-4408 or (563) 244-5208

DATE: January 1, 2005

SECTION II Hazardous Ingredients/Identity Information

COMPONENTS:

	CAS Number	OSHA PEL	ACGIH TLV	Volume
Ethanol (Ethyl Alcohol)	64-17-5	1000 ppm	1000	88.18%
Water	7732-18-5			7.26%
Methyl isobutyl ketone (MIBK)	108-10-1	100 ppm	50 ppm	3.77%
Solvent napththa (petroleum)	64742-89-8			0.644%

TSCA: Components of this product are listed on the TSCA inventory or are exempt from TSCA inventory requirements.

SARA TITLE III: Section 302 - To the best of our knowledge this product does not contain chemicals at levels which require reporting under this statute.
Section 311, 312 - Delayed hazard - yes; fire hazard - yes; immediate health hazard - yes; reactive hazard - no; sudden release of pressure hazard - no
Section 313 - Contains methyl isobutyl ketone, CAS #108-10-1 - ≤ 3.7700%

CALIFORNIA PROPOSITION 65: This product contains the following chemical(s) known to the State of California to cause cancer: Acetaldehyde, CAS #75-07-0, ≤0.1000 ppm.

CERCLA: The following components of this product are specifically listed as hazardous substances in 40 CFR 302.4 (unlisted hazardous substances are not identified) and are present at levels which could require reporting: Methyl isobutyl ketone (CAS #108-10-1) ≤ 3.7700%; Cyclohexane (CAS #110-82-7) ≤0.0522%; Hexane (CAS #110-54-3) ≤0.0934%; methanol (CAS #67-56-1) ≤0.0060%); Acetaldehyde (CAS #75-07-0) ≤ 0.0001%; Acetone (CAS #67-64-1) ≤ 0.0002%.

EUROPEAN INV. (EINECS) Components of this product are on the EINECS inventory or are exempt from EINECS inventory requirements.

SECTION III – Physical/Chemical Characteristics

Boiling Point, °F	174°F; 79°C
Freezing Point	< -121°F (< -85°C)
Vapor Pressure mm Hg	50 @ 20°C
Vapor Density (Air = 1)	1.5
Specific Gravity (H_2O=1)	0.8120 at 20/20°C
Evaporation Rate (Butyl Acetate=1)	3.8 (butyl acetate=1)
Solubility in Water	100% at 20°C
Appearance and Odor	Clear, bright; characteristic odor
Volatiles (by wt)	100%

SECTION IV – Fire and Explosion Hazard Data

Flash Point (Method Used): 67°F Tag Closed Cup
Flammable Limits (LEL): 3.3% (Ethanol)
Flammable Limits (UEL): 19.0% (Ethanol)
Extinguishing Media: Carbon dioxide, dry chemical and alcohol resistant foam
Special Fire Fighting Procedures: Water spray may be used to reduce burning rate and to cool fire-exposed containers. For large fires, apply alcohol-type or all-purpose-type foam by manufacturer's recommended techniques; for small fires use carbon dioxide or dry chemical media. Self-contained breathing apparatus and protective clothing should be worn by fire fighting personnel.
Unusual Fire and Explosion Hazards: Vapors form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, smoking, sparks, heaters, electrical equipment, static or other ignition sources at locations distant from product handling point. Vapors from this material may settle in low or confined areas or travel a distance to an ignition source and flash back explosively. May produce a floating fire hazard. Static ignition can result. Use proper bonding and grounding during product transfer as described In National Fire protection Association Document NFPA 77. Flame may be invisible. Approach fire with caution.

SECTION V – Reactivity Data

Stability/Instability: Stable
Conditions to Avoid: Heat, sparks and fire
Incompatibility (Materials to Avoid): Concentrated nitric and sulfuric acids, strong oxidizing agents
Hazardous Decomposition of By-products: Thermal decomposition or burning may produce carbon monoxide and/or carbon dioxide. Carbon monoxide is highly toxic if inhaled. Carbon dioxide in sufficient concentrations can act as an asphyxiant.
Hazardous Polymerization: Will not occur

SECTION VI – Health Hazard Data

Routes of Entry: Inhalation, skin, ingestion
Health Hazards (Acute and Chronic): Repeated exposure may exacerbate liver injury produced from other causes. May aggravate existing skin dermatitis.
Swallowing: May cause dizziness, faintness, drowsiness, decreased awareness and responsiveness, euphoria, abdominal discomfort, nausea, vomiting, staggering gait, lack of coordination and coma. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.
Skin Contact: Brief contact may cause slight irritation with itching and local redness. Prolonged or repeated contact may cause defatting and drying of the skin.
Eyes: Excess redness of the conjunctiva may occur. May cause irritation, experienced as stinging with excess blinking and tear production.
Inhalation: High vapor concentrations may cause a burning sensation in the nose and throat, and stinging and watering in the eyes. At concentrations that cause irritation, dizziness, faintness, drowsiness, nausea and vomiting may also occur. Liver and kidney damage may occur.
Toxicological: IARC has determined the consumption of alcohol beverages is causally related to the occurrence of malignant tumors of the oral cavity, pharynx, larynx, esophagus and liver in humans. The carcinogenic response attributed to drinking alcoholic beverages has not been verified in studies with laboratory animals.

Established uses of denatured ethanol and non-beverage uses of pure ethanol are not considered to pose any significant cancer

Medical Conditions Generally Aggravated by Exposure: Pre-existing disorders or diseases of the nervous system, liver, respiratory system, skin, eyes, gastro-intestinal tract.

Emergency and First Aid Procedures:

Swallowing: DO NOT INDUCE VOMITING. Do not give anything to drink. Obtain medical attention without delay.

Skin: Remove contaminated clothing. Wash skin with soap and water. If irritation persists or if contact has been prolonged, obtain medical attention.

Inhalation: Remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, qualified personnel may give oxygen. Obtain medical attention.

Eyes: Immediately flush eyes with water and continue washing for at least 15 minutes. DO NOT remove contact lenses, if worn. Obtain medical attention if discomfort.

SECTION VII – Precautions for Safe Handling and Use

Steps to be taken in Case Material is Released or Spilled: Eliminate all ignition sources. Small spills should be flushed with large quantities of water. Larger spills should be collected for disposal.

Waste Disposal Method: Incinerate where permitted under appropriate Federal, State and local regulations.

Precautions to be taken in Handling and Storing: Keep away from heat, sparks and open flame. Keep container closed. Use with adequate ventilation.

Other Precautions: Contains ingredients which render this product wholly unfit for beverage purposes. If taken internally will cause serious consequences to health.

SECTION VIII – Control Measures

Respiratory Protection:	Self-contained breathing apparatus in high vapor concentrations
Ventilation:	Local exhaust ventilation should be used
Protective Gloves:	Neoprene, PVC-coated
Eye Protection:	Chemical splash goggles

Other Protective Clothing or Equipment: Eye bath, safety shower

Work/Hygienic Practices: Practice good housekeeping.

HMIS Hazard Rating Index

1	HEALTH (Chronic effects)
3	FLAMMABILITY
0	REACTIVITY
H	PROTECTIVE EQUIPMENT

NFPA D.O.T. Disposal

1	HEALTH
3	FLAMMABILITY
0	REACTIVITY
N/A	OTHER

SECTION IX – Transportation Information

U.S. Dept. of Transportation

Proper Shipping Name	Alcohols, nos
Hazard Class	3
ID Number	UN 1987
Packing Group	II
Label Statement	Flammable Liquid

Water Transportation

Proper Shipping Name	Alcohols, nos
Hazard Class	3
ID Number	UN 1987
Packing Group	II

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This MSDS is based upon a limited review of ADM files and standard toxicological handbooks.
The information herein is furnished without warranty of any kind. This information should only be used as a supplement to information already in your possession concerning the product. The determination of whether and under what conditions the product should be used by your employees is yours to make.